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(54) Title: TUBULAR SIGNAL TRANSMISSION DEVICE AND METHOD OF MANUFACTURE

(57) Abstract: A signal transmission tube may be made by disposing a reactive polymeric material within a confinement tube and leaving a portion of the tube interior unoccupied. The tube may be formed by disposing a layer of paint comprising the reactive polymeric material on the interior surface of the confinement tube, extruding the confinement tube over an elongate rod that comprises the reactive polymeric material. The rod preferably has a high surface area configuration, e.g., the rod may comprise a longitudinal bore therethrough or may be star-shaped, cross-shaped, etc. Alternatively, the signal transmission tube may be made from the reactive polymeric material. Optionally, a sheath may be extruded over the tubular reactive polymeric material. In various embodiments, the confinement tube or sheath may be configured to be fractured or substantially consumed by the reaction of the reactive polymeric material. Optionally, the reactive polymeric material may comprise a glycidyl azide polymer.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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US CL : 102/275.8

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 102/275.8,275.9,275.1,275.5,275.6; 86/21,22,1.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

USPAT, US-PGPUB, Derwents Abstracts

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4,220,087 A (POSSON) 02 September 1980 (02.09.1980), see entire document.	1-25
A	US 4,699,059 A (KELLY et al.) 13 October 1987 (13.10.1987), see abstract.	16, 22
Y	US 5,681,904 A (MANZARA) 28 October 1997 (28.10.1997), see abstract; col. 1, lines 10-24; col. 2, lines 10-25.	1-25
A	US 3,590,739 A (PER-ANDERS PERSSON) 6 July 1971 (06.07.1971), see entire document.	1-25
A	US 5,827,994 A (GLADDEN et al.) 27 October 1998 (27.10.1998), see abstract.	16, 22
A	US 5,009,163 A (ROBINS et al.) 23 April 1991 (23.04.1991), see col. 4, lines 10 - 26,; claims 1 & 7.	17, 23
A	WO 01/08937 A1 (HERRMANN) 8 February 2001 (08.02.2001), see abstract and figures 1-4.	1-25
A	US 6,170,398 A (RABOTINSKY et al.) 09 January 2001 (09.01.2001), see abstract.	5, 10
A	US 4,756,250 A (DIAS DOS SANTOS) 12 July 1988 (12.07.1988), see abstract.	1-25



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C. (Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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A	US 5,509,355 A (STEWART et al.) 23 April 1996 (23.04.1996), see abstract.	1-25
A	US 5,383,405 A (EVEREST) 24 January 1995 (24.01.1995), see abstract, fig. 4.	1-25
A	US 4,607,573 A (THURESON et al.) 26 August 1986 (26.08.1986), see abstract and figures.	1-25
A	US 3,730,096 A (PRIOR), 01 May 1973 (01.05.1973), see abstract and figures.	1-25
A	US 5,212,341 A (OSBORNE et al.) 18 May 1993 (18.05.1993), see abstract and figures.	1-25